

## IR - Sadtler Solvents (Vapor Phase) - Wiley

Spectra - 620

### Description

This database contains the FT-IR reference spectra of 620 common solvents. It also provides supporting chemical and physical information that is commonly required for these chemicals. Spectroscopists identifying compounds in the vapor state from gas chromatography separations will find this database very useful in the evaluation and interpretation of vapor phase infrared spectra.

### Classifications

Hydrocarbons - 76  
 Hydroxyl Compounds - 62  
 Ethers - 36  
 Carbonyl Compounds - 145  
 Halogenated Hydrocarbons - 130  
 Nitrogen Compounds - 74  
 Sulfur Compounds - 46  
 More Than One Type Of Characteristic - 53  
 Atom Or Functional Group  
 Deuterated Compounds - 5  
 Water - 1

#### Below is a specific breakdown of compounds in the database:

Acetals - 4  
 Acid Alcohols - 1  
 Acid Anhydrides - 5  
 Aldehyde Ethers - 1  
 Aldehydes - 13  
 Alicyclic Ethers - 9  
 Aliphatic Acids - 11  
 Aliphatic Ethers - 15  
 Aliphatic Iodinated Hydrocarbons - 10  
 Aliphatic Ketones - 15  
 Aliphatic Monobrominated Hydrocarbons - 12  
 Aliphatic Monochlorinated Hydrocarbons - 11  
 Aliphatic Nitriles - 9

Aliphatic Polybrominated Hydrocarbons - 3  
 Aliphatic Polychlorinated Hydrocarbons - 13  
 Amides - 11  
 Amino Alcohols - 4  
 Amino Ethers - 11  
 Aromatic Brominated Hydrocarbons - 7  
 Aromatic Chlorinated Hydrocarbons - 5  
 Aromatic Ethers - 6  
 Aromatic Fluorinated Hydrocarbons - 5  
 Aromatic Hydrocarbons - 20  
 Aromatic Polychlorinated Hydrocarbons - 3  
 Carbonyl Alcohols - 1  
 Chloro Alcohols - 3  
 Chloro Amines - 3  
 Chloro Ethers - 7  
 Cyano Alcohols - 2  
 Deuterated Compounds - 5  
 Esters of Aliphatic Monocarboxylic Acids - 48  
 Esters of Aromatic Monocarboxylic Acids - 8  
 Esters of Chloro Acids - 5  
 Esters of Cyano Acids - 2  
 Esters of Dicarboxylic Acids - 20  
 Esters of Hydroxy Acids - 6  
 Esters of Keto Acids - 6  
 Esters of Polybasic Acids - 3  
 Esters of Unsaturated Monocarboxylic Acids - 6  
 Ether Alcohols - 18  
 Ether Esters - 5

Halogenated Acids - 2  
 Halogenated Compounds - 35  
 Lactones - 2  
 Monohydroxyl Aliphatic Alcohols - 38  
 Monohydroxyl Aromatic Alcohols - 9  
 Monohydroxyl Unsaturated Alcohols - 7  
 Nitro Compounds - 8  
 Nitro Ethers - 1  
 Other Ketones - 15  
 Other Nitriles - 8  
 Other Nitrogen Compounds - 7  
 Other Primary Amines - 2  
 Other Sulfur Compounds - 9  
 Polyhydroxyl Alcohols - 8  
 Primary Aliphatic Amines - 9  
 Primary Aromatic Amines - 11  
 Saturated Aliphatic Hydrocarbons - 36  
 Secondary Amines - 13  
 Sulfides - 6  
 Tertiary Amines - 13  
 Thioether Alcohols - 1  
 Thiols - 3  
 Unsaturated Acids - 4  
 Unsaturated Chlorinated Hydrocarbons - 6  
 Unsaturated Ethers - 1  
 Unsaturated Hydrocarbons - 20  
 Water - 1

### Technique

Most spectra were measured at Bio-Rad Laboratories using either a Digilab FTS-14 or FTS-15 Fourier transform spectrometer in the spectral region  $4000\text{ cm}^{-1}$  to  $450\text{ cm}^{-1}$  with a nominal resolution of  $4\text{ cm}^{-1}$  across the entire spectral region. A Sadtler CIRA 102 chromatographic infrared analyzer was used as the sampling device to measure all reference spectra. The carrier gas was helium. The compounds were examined at temperatures ranging from  $25^{\circ}\text{C}$  to  $300^{\circ}\text{C}$ , depending on the vaporization temperature required for the particular compound and its chemical stability. Thermally-sensitive compounds such as esters and acid chlorides were measured at the lowest possible cell temperature to reduce oxidation or thermal decomposition while the reference spectra were measured.

*This collection has been subject to the Sadtler Data Review Protocol™ to provide you with the highest standard in spectral data today. These rigorous qualifying procedures start at data acquisition and continue throughout the database development process.*